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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,677	10/15/2003	Tsung-Ming Shiao	BHT-3127-67	3383

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EXAMINER	
ANGEBRANNDT, MARTIN J	
ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/684,677	SHIAO ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/22/04 & 9/26/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not describe chemically resistant UV curable resins, other than KLASER-KV03, which is not described in terms of it's chemical composition (ie epoxy, urethane or acrylate, etc)

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1,2,3,6 and 7

"UV resin " should be replaced by - -UV curing resin - -

"metal wheel" should be replaced by - - metal cylinder- -.

"with a holographic pattern" in claim 1 should be - - bearing a holographic pattern --.

"evaporation plating layer with " should be - - evaporatively deposited layer of - -

"well chemical-resisting UV resin" should be - -organic solvent insoluble UV curable resin- -

"solvent –resisting" should read - - solvent resistant- - .

In claims 1 and 2, "each of two sides" should read - - each of the two outer surfaces- -

In claims 2 and 6, "mater film" and "master film" should be - - master- - .

In claim 3 and 6, "press wheel" should read - -press cylinder- - or --press roller--.

In claims 3 & 6, the press roller/cylinder is only in contact with the backside of the plastic film (ie not the side the UV curable resins is applied to.) The UV resin and plastic films are pressed between the master and the press roller/cylinder.

In claim 7, each of the another sides" should read - -each of the outer surfaces - -

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Amato et al. '120, in view of D'Amato '277, Ishimoto et al. '270 and Yin et al. '117.

D'Amato et al. '120 teach the use of vapor deposition of aluminum for the metallization (6/37-58). A process for continuously forming holograms on a web substrate is taught with respect to figure 3, where the web is coated with a UV curing resin from bath 69, it is then transferred to the embossing cylinder bearing the holographic pattern (61) and contact maintained through the use of the pressure rollers (77) and cured using the UV lamp (79). The holograms are then aluminized (39) and then provided with an overcoat. (5/24-7/39). The master may be a metal master. (5/24-40). The web substrate may be a plastic (2/48-56).

D'Amato '277 teaches a similar process with respect to figure 8, where e-beams are used to cure the resin. After metallization, a topcoat of a liquid resin is applied to the metallized surface and cured using UV or electron beams in unit 46. (11/27-50).

Ishimoto et al. '270 teach a holographic laminate where the protective layer (18) may be a plastic film, similar to that used for layer (14). This may be overcoated with a hardcoat to improve the protection of the surface from damage and the like. The coating can be a UV curable urethane acrylate (7/65-8/14).

Yin et al. '117 teach the substrate may be a glass or a polymer materials provided with a hard coating (3/33-37).

It would have been obvious to one skilled in the art to modify the teachings of D'Amato et al. '120 by using a UV curable protective coating provided atop the reflective layer as discussed by D'Amato '277 with a reasonable expectation of protective the underlying reflective layer from mechanical abrasion or the like, further it would have been obvious to provide a hardcoat on the backside of the substrate to provide additional protection to this surface as discussed by Ishimoto et al. '270 and Yin et al. '117 and to have both coatings be UV curable urethane acrylate hardcoat materials with a reasonable expectation of realizing the protection ascribed to these materials and allowing the UV lamp unit 46 to cure the coating on both sides with the resulting coatings having good resistance to at least some solvents.

The examiner holds the position that UV cured resins inherently are resistant to solvents and the like due to the increased crosslinking/polymerization. There is currently no evidence establishing the criticality of the use of KLASER KV03 or even the type of resin this is on the record. In the absence of any objective parameter concerning the degree of protection, the examiner holds that the claims are open to a wide range protection/insolubility form any of a range of organic solvents.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Amato et al. '120, in view of D'Amato '277, Ishimoto et al. '270 and Yin et al. '117, further in view of Takeuchi et al. '857.

Takeuchi et al. '857 teach the use of various materials for the reflection enhancing layer provided on the relief holographic surface. These include Al (table 5), TiO_2 and ZnS (table 1).

In addition to the basis provided above, the examiner holds that it would ahev been obvious to one skilled in the art to modify the invention rendered obvious by the combination of D'Amato et al. '120 with D'Amato '277, Ishimoto et al. '270 and Yin et al. '117 by using other reflectivity enhancing materials in place of the Al, such as TiO_2 or ZnS based upon their known equivalence in the art for reflection enhancing coatings to be used with relief holograms as evidenced by Takeuchi et al. '857.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 06-344439 (machine translation attached) teaches UV cured coatings on both sides of the substrate.

Coates '887 teaches provision of a solvent resistant adhesive on both sides of the holographic reflective layer.

Mallik et al. '548 and Shvartsman '689 teaches embossing holograms into UV curing resins.

Tawara et al. JP 05-035173 teach the pressure roller opposite the embossing roller in figure 3.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

04/05/2006